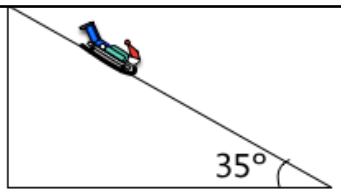
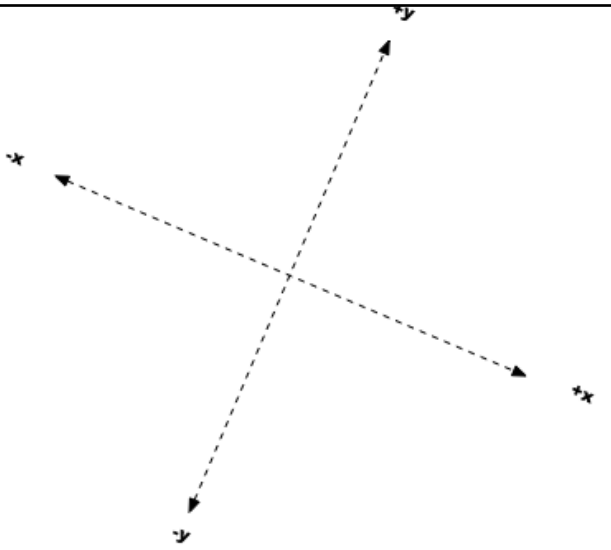


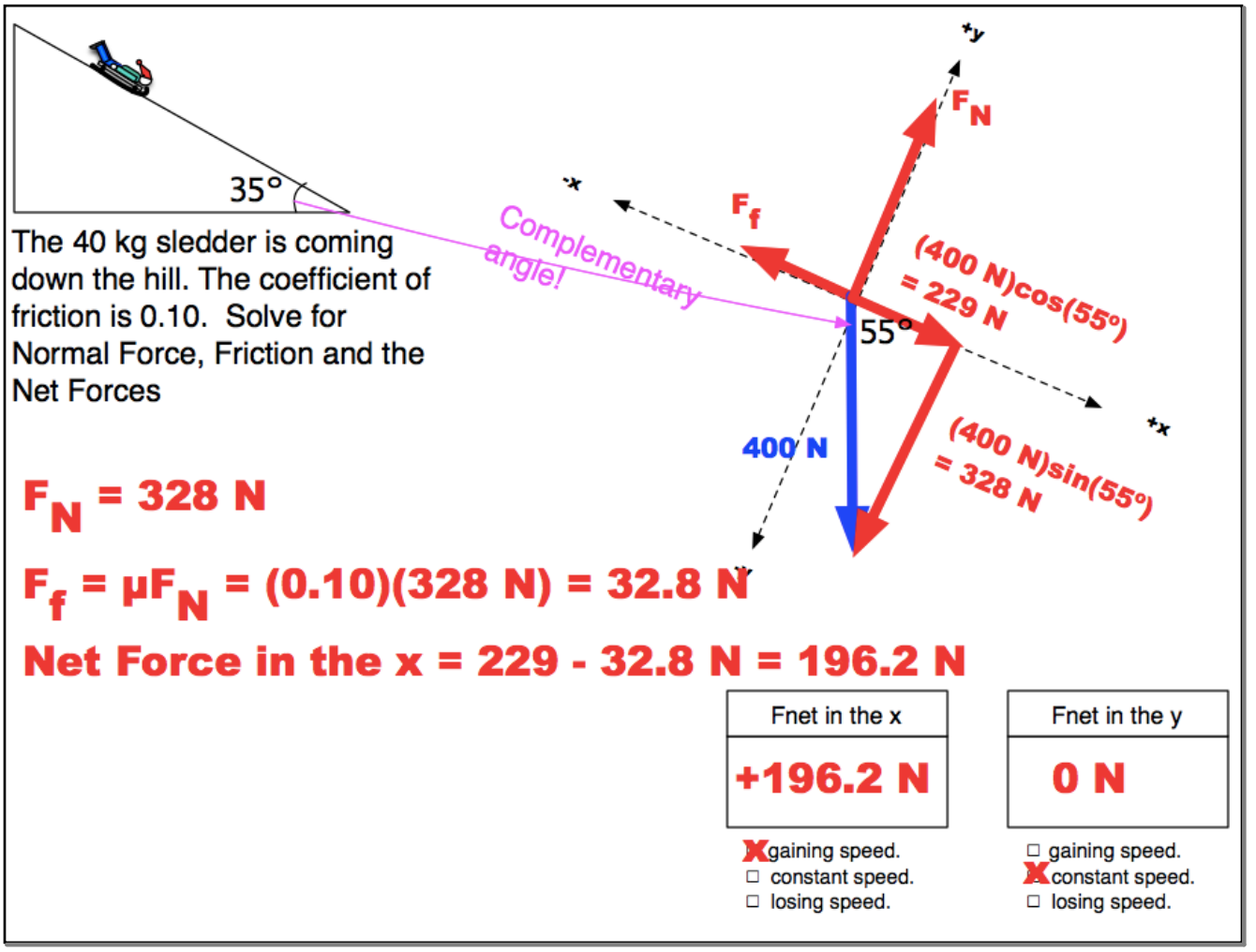
The 40 kg sledder is coming down the hill. The coefficient of friction is 0.10. Solve for Normal Force, Friction and the Net Forces

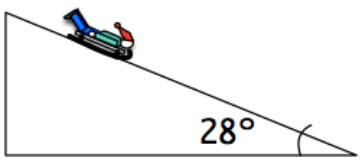


Fnet in the x	Fnet in the y

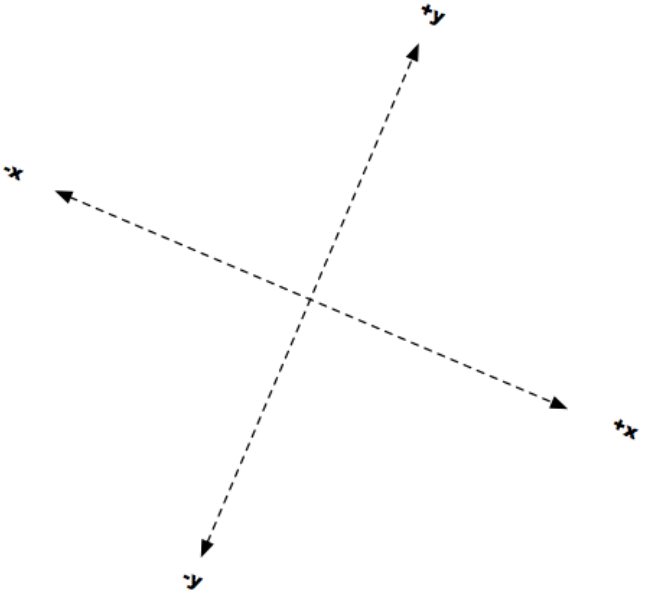
- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.

- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.


35°
The 40 kg sledder is coming down the hill. The coefficient of friction is 0.10. Solve for Normal Force, Friction and the Net Forces
Complementary angle!
+y
+x
F_N
F_f
(400 N)cos(55°) = 229 N
55°
400 N
(400 N)sin(55°) = 328 N
F_N = 328 N
$F_f = \mu F_N$ = (0.10)(328 N) = 32.8 N
Net Force in the x = 229 - 32.8 N = 196.2 N
Fnet in the x
+196.2 N
X gaining speed.
☐ constant speed.
☐ losing speed.
Fnet in the y
0 N
☐ gaining speed.
X constant speed.
☐ losing speed.



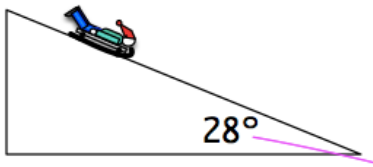
The 75 kg sledder is coming down the hill. The coefficient of friction is 0.15. Solve for Normal Force, Friction and the Net Forces



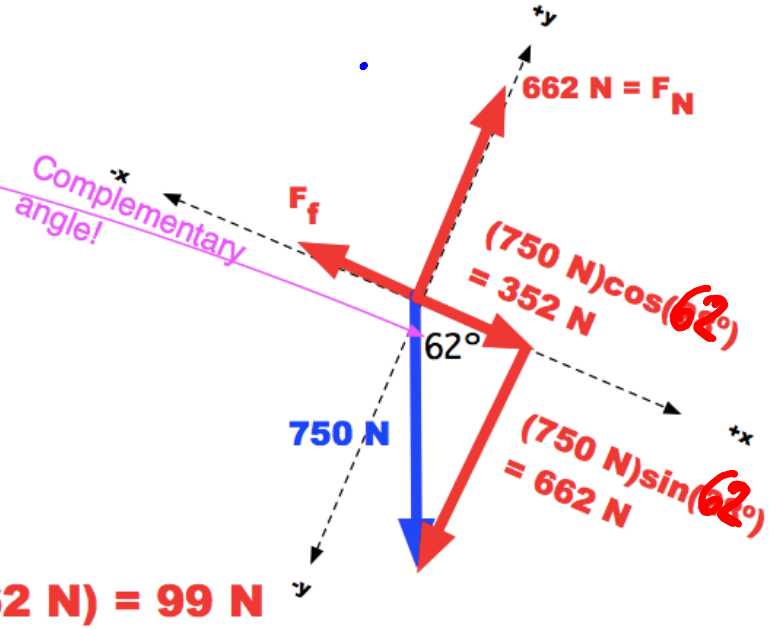
Fnet in the x	Fnet in the y

- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.

- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.



The 75 kg sledder is coming down the hill. The coefficient of friction is 0.15. Solve for Normal Force, Friction and the Net Forces



F_N = 662 N

$F_f = \mu F_N$ = (0.15)(662 N) = 99 N

Net Force in the x = 352 - 99 N = 253 N

Fnet in the x	Fnet in the y
+253 N	0 N
X gaining speed. ☐ constant speed. ☐ losing speed.	☐ gaining speed. X constant speed. ☐ losing speed.